

REMARKS

The Examiner rejected claims 10-25 and 27-30 under 35 U.S.C. §112, second paragraph.

The Examiner rejected claims 10, 11, 14, 16, 20, 24, and 27-29 under 35 U.S.C. §102(b) as allegedly being anticipated by Nishimura et al. (USPAT 5604380, Nishimura).

The Examiner rejected claims 10, 17-19 and 30 under 35 U.S.C. §102(b) as allegedly being anticipated by Kozono (USPAT 5619070).

The Examiner rejected claims 12 and 25 under 35 U.S.C. §103(a) as allegedly being unpatentable over Nishimura as applied to claim 10 above, and further in view of Chen et al. (USPAT 5413950, Chen).

The Examiner rejected claim 13 under 35 U.S.C. §103(a) as allegedly being unpatentable over Nishimura as applied to claim 10 above, and further in view of Nishino et al. (USPAT 5586385, Nishino).

The Examiner rejected claim 15 under 35 U.S.C. §103(a) as allegedly being unpatentable over Nishimura as applied to claim 10 above, and further in view of Ichinose et al. (USPAT 5681402, Ichinose).

The Examiner rejected claim 21 under 35 U.S.C. §103(a) as allegedly being unpatentable over Nishimura as applied to claim 10 above, and further in view of Robeson et al. (GB PAT 2297503, Robeson).

The Examiner rejected claims 22 and 23 under 35 U.S.C. §103(a) as allegedly being unpatentable over Nishimura as applied to claim 10 above, and further in view of one of ordinary skill in the art.

Applicants traverse the §112, §102 and §103 rejections with the following arguments.

35 U.S.C. §112, Second Paragraph

The Examiner rejected claims 10-25 and 27-30 under 35 U.S.C. §112, second paragraph.

As a first rejection with respect to claims 10, 28, and 29, the Examiner alleged that the claim "recites the limitation "the following steps" in the first line of the claim. There is insufficient antecedent basis for this limitation in the claim. For purposes of this office action "the following steps" will be considered --steps--."

As a second rejection with respect to claims 10, 28, and 29, the Examiner alleged that the claim "recites the limitation "the indicated order" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim. No order has been indicated in the claims. Therefore, no order will be considered.... It should be noted that an indicated sequential order implies that there is a definite order claimed. Such order is characterized by something to the effect of "...a first step of...a second step of..." or "...after forming..." or "...after providing..." and all steps would fit somewhere into the order."

In response, Applicants contend that the rejection of claims 10-25 and 27-30 under 35 U.S.C. §112, second paragraph is moot in light of the amendment herein which deletes the phrase "performed in the indicated sequential order" from claims 10, 28, and 29.

35 U.S.C. §102Nishimura

The Examiner rejected claims 10, 11, 14, 16, 20, 24, and 27-29 under 35 U.S.C. §102(b) as allegedly being anticipated by Nishimura et al. (USPAT 5604380, Nishimura). The Examiner alleges that "Nishimura discloses in figure 2a a method for forming an electronic structure. Nishimura discloses in figure 2a providing a metallic plate (3) such that all exterior surfaces of the metallic plated are exposed. Nishimura discloses in figure 2a forming a mineral layer (4) on the metallic plate. Nishimura discloses in figure 2a forming an adhesion promoter layer (5) on the mineral layer."

Applicants respectfully contend that Nishimura does not anticipate claims 10, 28, and 29 because Nishimura et al. does not teach each and every feature of claims 10, 28, and 29. For example, Nishimura does not teach "providing a metallic plate such that all exterior surfaces the metallic plate are exposed to an ambient atmosphere". In contrast, Nishimura teaches depositing an Al film on the semiconductor substrate 1 to form the metallic plate (3) (see Nishimura, col. 10, lines 26-29). Thus, the metallic plate (3) that is so formed is not provided as having all of its exterior surfaces exposed to an ambient atmosphere as required by claim 10.

Based on the preceding argument, Applicants respectfully maintain that Nishimura does not anticipate claims 10, 28, and 29, and that claims 10, 28, and 29 are in condition for allowance. Since claims 11, 14, 16, 20, 24, and 27 depend from claim 10, Applicants contend that claims 11, 14, 16, 20, 24, and 27 are likewise in condition for allowance.

Kozono

The Examiner rejected claims 10, 17-19 and 30 under 35 U.S.C. §102(b) as allegedly being anticipated by Kozono (USPAT 5619070). The Examiner alleges that "Kozono discloses in figure 2a a method for forming an electronic structure. Kozono discloses in figure 2a providing a metallic plate (15). Kozono discloses in figure 2a forming a mineral layer (14) on the metallic plate. Kozono discloses in figure 2a an adhesion promoter layer (13) on the mineral layer."

Applicants respectfully contend that Kozono does not anticipate claim 10, because Kozono does not teach each and every feature of claim 10.

As a first reason why Kozono does not teach each and every feature of claim 10, Kozono does not teach "forming a mineral layer on the metallic plate". Applicants respectfully contends that Kozono does not teach that the adhesive 14 is a mineral layer as alleged by the Examiner. Since Kozono does not disclose any material composition for the adhesive 14, one may not conclude that Kozono teaches that the adhesive 14 is a mineral layer.

In the Examiner's "Response To Arguments", the Examiner alleges: Kozono clearly teaches that the adhesive layer is an mineral layer. Kozono's disclosure encompasses all known conductive adhesive layers. The applicant has not showed any evidence that a conductive adhesive layer can never be a mineral layer. Neither has the applicant claimed what material comprises the mineral layer. Thus, Kozono reads on the claimed invention. Therefore the applicant's arguments are not persuasive, and the rejection is proper."

In response to the preceding argument by the Examiner, Applicants respectfully contend that the rejection under 35 U.S.C. §102(b) requires that Kozono explicitly or inherently teach that the adhesive 14 is a mineral layer, and the Examiner has not cited any text within Kozono to show that Kozono explicitly or inherently teaches that the adhesive 14 is a mineral layer. Although the Examiner has alleged that "Kozono's disclosure encompasses all known conductive adhesive layers", the Examiner has provided no citation in Kozono to support said allegation. Accordingly, Applicants maintain that Kozono does not anticipate claim 10.

As a second reason why Kozono does not teach each and every feature of claim 10, Kozono does not teach "forming an adhesion promoter layer on the mineral layer". Applicants respectively contends that the mounting plate 13 is not an adhesion promoter as alleged by the Examiner. Instead, the mounting plate 13 is a plate structure having two plates, namely plates 13-1 and 13-2 as shown in FIG. 2B and described in col. 4, lines 3-20. Plate 13-1 is an insulating plate made of a ceramic material and plate 13-2 is a metal layer (see Kozono, col. 4, lines 5-6, 11-13), which confirms that the mounting plate 13 does not have the functionality of adhesion promotion. Therefore, one may not conclude that Kozono teaches that the mounting plate 13 is an adhesion promoter layer.

In the Examiner's "Response To Arguments", the Examiner alleges: In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.... In this case the plate 13 has the intended use of promoting the adhesion between mineral layer 14 and the layer 12 in figure 2a of Kozono".

In response to the preceding argument by the Examiner, Applicants respectfully contend

that the Kozono's mounting plate 13 does not have the functionality or intended use of being an adhesion promoter layer, as explained *supra* with reference to FIG. 2B and col. 4, lines 3-20 of Kozono. The Examiner has provided no citation in Kozono that supports the Examiner's allegation that "the plate 13 has the intended use of promoting the adhesion between mineral layer 14 and the layer 12 in figure 2a of Kozono." Accordingly, Applicants maintain that Kozono does not anticipate claim 10.

Int. use is not part. Subj. matter

As a third reason why Kozono does not teach each and every feature of claim 10, Kozono does not teach "forming an adhesion promoter layer on the mineral layer after the step of forming a mineral layer is performed" (emphasis added). Kozono teaches in col. 3, lines 46-48 that "[t]he semiconductor chip mounting plate 13 is fixed to a heat radiating plate 15 made of Cu or the like, by means of the adhesive 14", which is not a teaching that the mounting plate 13 is formed on the adhesive layer 14 after the adhesive layer 14 is formed on the radiating plate 15. For example, the preceding description in Kozono is consistent with first forming the adhesive layer 14 on the chip mounting plate 13, followed by forming the heat radiating plate 15 on the adhesive layer 14.

Based on the preceding arguments, Applicants respectfully maintain that Kozono does not anticipate claim 10, and that claim 10 is in condition for allowance. Since claims 17-19 and 30 from claim 10, Applicants contend that claims 17-19 and 30 likewise in condition for allowance.



35 U.S.C. §103

The Examiner rejected claims 12, 13, 15, 21, 22, 23, and 25, under 35 U.S.C. §103(a). Since claims 12, 13, 15, 21, 22, 23, and 25 depend from claim 10, which Applicants have argued *supra* to be patentable under 35 U.S.C. §102, Applicants maintain that claims 12, 13, 15, 21, 22, 23, and 25 are not unpatentable under 35 U.S.C. §103(a).

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CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims 10-30 and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below.

Date: _____

Jack P. Friedman
Registration No. 44,688

Schmeiser, Olsen & Watts
3 Lear Jet Lane, Suite 201
Latham, New York 12110
(518) 220-1850

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